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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,130	10/23/2003	Yong Ju Lee	51876P402	1732
8791 7590 08/23/2007 BLAKELY SOKOLOFF TAYLOR & ZAFMAN 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER NGUYEN BA, HOANG VU A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/693,130	<b>Applicant(s)</b> LEE ET AL.	
	<b>Examiner</b> Hoang-Vu A. Nguyen-Ba	<b>Art Unit</b> 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/23/03, 10/15/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is responsive to the application filed October 23, 2003.
2. Claims 1-20 have been examined. Claims 1 and 12 are independent claims.

#### ***Priority***

3. The priority date considered for this application is October 26, 2002, which is the filing date of the Korean Patent Application Publication No. 10-2002-65642. A certified copy of the priority application has been received and placed in the application file.

#### ***Oath/Declaration***

4. The Office acknowledges receipt of a properly signed oath/declaration filed October 23, 2003.

#### ***Information Disclosure Statement***

5. The Office acknowledges receipt of the Information Disclosure Statements filed October 23, 2003 and October 15, 2004. They have been placed in the application file and the information referred therein has been considered.

#### ***Drawings***

5. The drawings filed October 23, 2003 are accepted by the examiner.

#### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the limitation *the step of: b) determining whether all of the DAUs of synchronized stream data are injected or not, and going back to the step b) if there is any of the DAUs to be injected, go to step b)*. This limitation is vague and indefinite. The repetition of the step “going back to step b)” is confusing. The office assumes that if there is any remaining DAUs to be injected the program will go back to step b). However, the Office does not know what the program will do if there is no more DAU to be injected.

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1-2, 4, 6-10, 12-13, 16-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Korean Patent Application Publication No. 10-2002-0066260 by Park-Choi-Kim (“Park”).

### **Claim 1**

Park discloses an *apparatus for injecting synchronized stream data for a digital data broadcasting service* (see at least FIGs. 1-2), *comprising:*

*an additional data storing means for storing, managing and outputting additional data used for the digital data broadcasting service (see at least FIG. 2, item 21);*

*a synchronized stream data selection/ establishment means for selecting synchronized stream data to be multiplexed with a video/ audio transport stream, which is inputted from the outside, among the additional data stored in the additional data storing means, and establishing parameter values necessary to multiplex the selected synchronized stream data and the video/ audio transport stream (see at least FIG. 2, item 22);*

*a synchronized stream data analyzing means for analyzing the selected synchronized stream data periodically based on the parameter values established in the synchronized stream data selection/ establishment means, and generating information related to the transport stream of the synchronized stream data (see at least FIG. 2, item 22);*

*a transport stream analyzing means for analyzing the video/ audio transport stream periodically based on the parameter values established in the synchronized stream data selection/ establishment means, and generating information related to the video/ audio transport stream (see at least FIG. 2, item 25);*

*a synchronized stream data injection/ management means for determining whether to inject a data access unit (DAU) that forms the synchronized stream data or not based on the information related to the synchronized stream data transport stream generated in the synchronized stream data analyzing means and the information related to the video/ audio transport stream generated in the transport stream analyzing means, and controlling the output of the DAU that forms the synchronized stream data which are stored in the additional data storing means (see at least FIG. 2, item 23);*

*a presentation time stamp re-stamping means for re-stamping the presentation time stamp of the synchronized stream data which are outputted from the additional data storing means based on the parameter values established in the synchronized stream data selection/ establishment means (see at least FIG. 2, item 26); and*

*a multiplexing means for multiplexing and outputting the video/ audio transport stream and the synchronized data outputted from the presentation time stamp re-stamping means (see at least FIG. 2, item 24).*

#### **Claim 2**

The rejection of base claim 1 is incorporated. Park further discloses *wherein the parameter values established in the synchronized stream data selection/ establishment means include at least any one selected from a group having a new presentation time stamp of a first DAU of the synchronized stream data; an injection period, which is a time interval for analyzing the video/ audio transport stream and synchronized stream data and injecting the synchronized stream data to the video/ audio transport stream; and the number of analyzed DAU within the analyzed synchronized stream data during the above established injection period (see at least Abstract, Constitution, and paragraph 37).*

#### **Claim 4**

The rejection of base claim 1 is incorporated. Park further discloses *wherein if synchronized stream data synchronized with the video/ audio transport stream are not stored in the additional data storing means, the synchronized stream data selection/ establishment means receives the synchronized stream data from the outside and stores the synchronized stream data in the additional data storing means (see at least FIG.2, item 21).*

#### **Claim 6**

The rejection of base claim 1 is incorporated. Park further discloses *wherein the transport stream analyzing means analyzes the video/ audio transport stream periodically based on the injection period established in the synchronized stream data selection/ establishment means, and obtains the program clock references (PCRs) of the beginning part and the final part of the analyzing*

*section of the video/audio transport stream analyzed during one injection period (see at least FIG. 2, item 23; Abstract, Constitution).*

### Claim 7

The rejection of base claim 1 is incorporated. Park further discloses *wherein in order to calculate PCR of the transport stream, the transport stream analyzing means directly obtains a PCR value from a transport stream including PCR within the analyzing section, obtains PCR from the transport stream packets including PCR among the inputted MPEG-2 transport streams by calculating the PCR for another transport stream packet using an output rate of the MPEG-2 transport stream, or by having a reference clock that increases at 27 MHz which is a per-second increase of PCR of the transport stream analyzing means, and obtains the PCR value by establishing the value of the reference clock with the same value as the obtained PCR and then obtaining the value of the reference clock at a moment when the PCR value is needed (see at least Abstract, Constitution, paragraphs 17, 48).*

### Claim 8

The rejection of base claim 1 is incorporated. Park further discloses *wherein the synchronized stream data injection/management means calculates the presentation time offset value by using the difference between the new presentation time stamp of a first DAU of the synchronized stream data established in the synchronized stream data selection/establishment means and the presentation time stamp of the first DAU of the synchronized stream data obtained in the synchronized stream data analyzing means, calculates a new presentation time stamp of DAU of the synchronized stream data by adding the presentation time offset value to the presentation time stamp of DAU of the synchronized stream data obtained periodically in the synchronized stream data analyzing means, compares the calculated new presentation time stamp with the PCR generated periodically based on the injection period, which is established in the synchronized stream data*

*selection/establishment means, in the transport stream analyzing means, and if the new presentation time stamp of DAU is larger than the PCR in the final part of the video/audio transport stream currently analyzed and smaller than the summation of the PCR increase during one period and the PCR of the final part, determines to inject the corresponding DAU, and controls the additional data storing means to output the corresponding DAU (see at least Abstract, Constitution, paragraphs 17, 48).*

### **Claim 9**

The rejection of base claim 1 is incorporated. Park further discloses *wherein if a new presentation time stamp for the first DAU is stamped in the synchronized stream data selection/establishment means, the presentation time stamp re-stamping means receives synchronized stream data outputted from the additional data storing means, re-stamps the presentation time stamp of DAU that forms the synchronized stream data by referring to the presentation time stamp newly stamped in the synchronized stream data selection/establishment means, and outputs the re-stamped presentation time stamp of DAU to the multiplexing means, and wherein, to re-stamp the presentation time stamp of all DAU that form the synchronized stream data, the presentation time stamp re-stamping means calculates the presentation time offset value by using the difference between the presentation time stamp of the first DAU of the synchronized stream data and the new presentation time stamp stamped in the synchronized stream data selection/establishment means, and re-stamps the presentation time stamp of all DAU that form the synchronized stream data by adding the presentation time offset value to the presentation time stamp of all DAU that form the synchronized stream data (see at least FIG. 2, items 22, 23, 26; paragraph 37).*



**Claim 10**

The rejection of base claim 1 is incorporated. Park further discloses *wherein the multiplexing means injects the DAU of the synchronized stream data outputted from the presentation time stamp re-stamping means into the places of null packets in the video/audio transport stream within a section analyzed in the transport stream analyzing means, instead of the null packets* (see at least Abstract, Constitution, paragraphs 17-19, Table 1).

**Claim 12**

Since Claim 12 is an independent claim reciting a method that performs the same functions of the components recited in Claim 1, the same rejection is thus applied.

**Claim 13**

The rejection of base claim 12 is incorporated. Park further discloses *the step of: g) going back to the step b) if the section does not satisfy the condition for injecting the DAU* (see at least FIG. 3, the loop back to step 303 from step 305).

**Claim 16**

The rejection of base claim 12 is incorporated. Park further discloses *wherein the PCRs of the beginning part and the final part of the analyzing section of the video/audio transport stream analyzed during one injection period are obtained by analyzing the video/audio transport stream periodically based on the injection period* (see at least Abstract, Constitution, paragraphs 17, 48).

### **Claim 17**

Since Claim 17 recites the same functions of the synchronized stream data injection/management means of Claim 8, the same rejection is thus applied.

### **Claim 18**

The rejections of base claim 12 and intervening claim 17 are incorporated. Park does not specifically disclose *wherein the step d1) includes the steps of:*

*d1-1) calculating a presentation time offset value by using the difference between the new presentation time stamp of the first DAU of the synchronized stream data established in the step a) and the presentation time stamp of the first DAU of the synchronized stream data obtained in the step b); and*

*d1-2) calculating the new presentation time stamp of the DAU of the synchronized stream data by adding the presentation time offset value to the presentation time stamp of DAU of the synchronized stream data.*

However, this step is deemed inherent to Park as Park discloses a Presentation Time Stamp (PTS) and a PTS extension in paragraph 37. The PTS extension is the PTS with the added time corresponding to the injection time period. Without adding the injection time period (i.e., presentation time offset value), the PTS extension could not be calculated and thus provided by Park as disclosed in paragraph 37.

### **Claim 19**

Since Claim 19 recites the same features of Claim 9, the same rejection is thus applied.

### Claim 20

The rejections of base claim 2 and intervening claim 19 are incorporated. Park does not specifically disclose *wherein the step e) further includes the step of: if a new presentation time stamp for the first DAU of the selected synchronized stream data is not established, returning to the step f)*. However, the recitation of this step is deemed inherently contained in Claim 12 since Claim 12 recites in step e) that if the DAU of the synchronized stream data is to be injected into the V/A transport stream, the analyzing section re-stamps the presentation time stamp, else the program will go to step f). Therefore, Claim 20 does not further limit Claim 12 and is thus deemed redundant.

### *Claim Rejections - 35 USC § 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3, 5, 11, 14, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korean Patent Application Publication No. 10-2002-0066260 by Park-Choi-Kim ("Park"):

### Claim 3

The rejection of base claim 1 is incorporated. Park does not specifically disclose *wherein if the number of analyzed DAU is not established in the synchronized stream*

*data selection/establishment means, the synchronized stream data selection/establishment means calculates the number of analyzed DAU by multiplying the largest value (59, 94 or 60) of the number of frequency of DAU generation to the established injection period, and if the injection period and the number of analyzed DAU are not established in the synchronized stream data selection/establishment means, the injection period and the number of DAU to be injected are determined to be 50 msec and 3, respectively.*

However, Park does teach, at paragraphs 34-37, that the two functions of Supplementary Data Offer Part 21 is: 1) to store supplementary data received from an external source and 2) to multiplex stored data with the video/audio payload (see FIG. 1) according to the transmission rate. The function of storing a supplementary data and that of multiplexing imply that more than one supplementary data source can be implemented. The function of multiplexing according to the transmission rate implies that the multiplexing is time-dependent which requires a certain period at least equal to the transmission rate of the transmitted data blocks between two multiplexing actions. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teachings of Park to accommodate more than one Supplementary Data Offer Part, e.g., 3 by default and to set a default time frequency for multiplexing action, e.g., 50 msec in order to ensure a predictable error-free data streaming process.

### **Claim 5**

The rejection of base claim 1 is incorporated. Park does not specifically disclose *wherein the synchronized stream data analyzing means obtains as many DAU as the analyzed DAU by analyzing the synchronized stream data selected in the synchronized stream data selection/establishment means based on the injection period and the number of analyzed DAU*

*established in the synchronized stream data selection/establishment means, and obtains the presentation time stamp of a corresponding DAU and the number of transport stream packets.*

However, Park does teach, at paragraphs 34-37, that the two functions of Supplementary Data Offer Part 21 is: 1) to store supplementary data received from an external source and 2) to multiplex stored data with the video/audio payload (see FIG. 1) according to the transmission rate. The function of storing a supplementary data and that of multiplexing imply that more than one supplementary data source can be implemented. The function of multiplexing according to the transmission rate implies that the multiplexing is time-dependent which requires a certain period at least equal to the transmission rate of the transmitted data blocks between two multiplexing actions. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teachings of Park to accommodate more than one Supplementary Data Offer Part, e.g., 3 by default and to set a default time frequency for multiplexing action, e.g., 50 msec in order to ensure a predictable error-free data streaming process.

### **Claim 11**

The rejection of base claim 1 is incorporated. Park does not specifically disclose *wherein if the number of DAU multiplexed in the video/audio transport stream analyzed in the transport stream analyzing means is more than two, the multiplexing means injects the DAU into the video/audio transport stream in the order of quick presentation time stamp, and the locations for DAU to be injected into are moved from a part where PCR of the analyzed video/audio transport stream is small to a part where PCR of the analyzed video/audio transport stream is large.*

However, Park does teach, at paragraphs 34-37, that the two functions of Supplementary Data Offer Part 21 is: 1) to store supplementary data received from

an external source and 2) to multiplex stored data with the video/audio payload (see FIG. 1) according to the transmission rate. The function of storing a supplementary data and that of multiplexing imply that more than one supplementary data source can be implemented. The function of multiplexing according to the transmission rate implies that the multiplexing is time-dependent which requires a certain period at least equal to the transmission rate of the transmitted data blocks between two multiplexing actions. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teachings of Park to accommodate more than one Supplementary Data Offer Part, e.g., 3 by default and to set a default time frequency for multiplexing action, e.g., 50 msec in order to ensure a predictable error-free data streaming process.

#### **Claim 14**

The rejection of base claim 12 is incorporated. Park does not specifically disclose *the step of: b) determining whether all of the DAUs of synchronized stream data are injected or not, and going back to the step b) if there is any of the DAUs to be injected, go to step b).*

As for the recitation of more than one DAU (e.g., “whether all of the DAUS”), see discussion in Claim 11.

As for the recitation of the limitation “if there is any of the DAUs to be injected, go to step b),” this step is deemed inherent to the modified Park which has more than one supplementary data to process. Without looping back to step b), the program will not know that there are more than one supplementary data that need to be processed and thus proceed to the next step that follows step b).

### **Claim 15**

The rejection of base claim 1 is incorporated. Park does not specifically disclose *wherein the step a) includes the steps of:*

*a1) if the number of analyzed DAU is not established, calculating the number of analyzed DAU by multiplying the largest value (59.94 or 60) of the number of frequency of DAU generation to the injection period established above; and*

*a2) if the injection period and the number of analyzed DAU are not established, determining the injection period and the number of analyzed DAU to be 50 msec and 3, respectively.*

However, Park does teach, at paragraphs 34-37, that the two functions of Supplementary Data Offer Part 21 is: 1) to store supplementary data received from an external source and 2) to multiplex stored data with the video/audio payload (see FIG. 1) according to the transmission rate. The function of storing a supplementary data and that of multiplexing imply that more than one supplementary data source can be implemented. The function of multiplexing according to the transmission rate implies that the multiplexing is time-dependent which requires a certain period at least equal to the transmission rate of the transmitted data blocks between two multiplexing actions. Thus, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teachings of Park to accommodate more than one Supplementary Data Offer Part, e.g., 3 by default and to set a default time frequency for multiplexing action, e.g., 50 msec in order to ensure a predictable error-free data streaming process.

### **Conclusion**

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

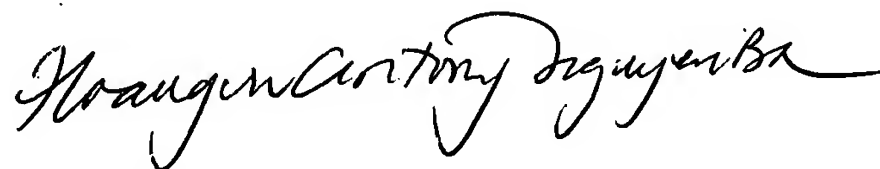
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (571) 272-3701. The examiner can normally be reached on Tuesday-Friday from 7:00 am to 5:30 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, John Miller can be reached at (571) 272-7353.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2600 Group receptionist (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



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